

U.S. Ser. No. 09/734,836
Amendment Under 37 C.F.R. §1.116
June 28, 2004

IN THE CLAIMS:

Claims 1-7, 14, 20-22 and 34-39 (Previously Cancelled)

Claims 8-13, 15-19, 23-33 and 40-72 (Cancelled Without Prejudice)

Claim 73 (Previously Amended) A virion produced by a producer cell comprising:

- a) a BIV gag/pol coding sequence;
- b) a viral envelope coding sequence; and
- c) a vector construct comprising a promoter linked to a first BIV R region, a BIV U5 element linked to the first BIV R region, a packaging sequence, a transgene, a 3' polypurine tract, and a BIV U3 element linked to a second BIV R region, wherein the promoter initiates RNA transcription of the vector construct.

Claims 74-79 (Previously Cancelled).

Claim 80 (Previously Amended) A virion comprising an RNA vector, said RNA vector comprising a first BIV R region linked to a BIV U5 element, a packaging sequence, a transgene operably linked to a promoter, a 3' polypurine tract, and a BIV U3 element linked to a second BIV R region.

Claim 81 (Original): A virion according to claim 73, wherein the transgene is operably linked to an internal promoter.

Claim 82 (Original): A virion according to claim 73, wherein one or more nucleotide sequences in the U3 element are mutated or deleted in order to diminish or eliminate U3-mediated transcription.

Claim 83 (Original): A virion according to claim 73, wherein the packaging

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sequence is a BIV packaging sequence.

Claim 84 (Original): A virion according to claim 73, wherein any start condons in the packaging sequence are eliminated by deletion or mutation.

Claim 85 (Original): A virion according to claim 73, wherein the U3 element further comprises a sequence that enhances polyadenylation.

Claim 86 (Original): A virion according to claim 73, wherein the major splice donor site has been inactivated or eliminated.

Claim 87 (Original): A virion according to claim 73, further comprising a cPPT.

Claim 88 (Original): A virion according to claim 87, wherein the cPPT is a BIV cPPT.

Claim 89 (Original): A virion according to claim 73, further comprising an RNA transport element.

Claim 90 (Original): A virion according to claim 89, wherein the RNA transport element is a lentiviral rev response element (RRE).

Claim 91 (Original): A virion according to claim 90, wherein the lentiviral RRE is a BIV RRE.

Claim 92 (Original): A virion according to claim 89, wherein the RNA transport element is a constitutive transport element (CTE).

Claim 93 (Original): A virion according to claim 92, wherein the CTE is a Mason-Pfizer Monkey Virus CTE.

Claim 94 (Original): A virion according to claim 80, wherein the transgene is

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operably linked to an internal promoter.

Claim 95 (Original): A virion according to claim 80, wherein one or more nucleotide sequences in the U3 element are mutated or deleted in order to diminish or eliminate U3-mediated transcription.

Claim 96 (Original): A virion according to claim 80, wherein the packaging sequence is a BIV packaging sequence.

Claim 97 (Original): A virion according to claim 80, wherein any start codons in the packaging sequence are eliminated by deletion or mutation.

Claim 98 (Original): A virion according to claim 80, wherein the U3 element further comprises a sequence that enhances polyadenylation.

Claim 99 (Original): A virion according to claim 80, wherein the major splice donor site has been inactivated or eliminated.

Claim 100 (Original): A virion according to claim 80, further comprising a cPPT.

Claim 101 (Original): A virion according to claim 100, wherein the cPPT is a BIV cPPT.

Claim 102 (Original): A virion according to claim 80, further comprising an RNA transport element.

Claim 103 (Original): A virion according to claim 102, wherein the RNA transport element is a lentiviral rev response element (RRE).

Claim 104 (Original): A virion according to claim 103, wherein the lentiviral RRE is a BIV RRE.

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Claim 105 (Original): A virion according to claim 102, wherein the RNA transport element is a constitutive transport element (CTE).

Claim 106 (Original): A virion according to claim 105, wherein the CTE is a Mason-Pfizer Monkey Virus CTE.